

***Continuation-in-Part Application for  
United States Letters Patent***

09553877-042000

***TO ALL WHOM IT MAY CONCERN:***

Be it known that we, Gerald Peters, a citizen of the United States, residing at 17119 Highway 86, Kiowa, Box 535, Colorado 80117; Jon Sykes, a citizen of the United States, residing at 4007 Denise Court, Glenview, Illinois 60025; and Arthur Pennington, a citizen of the United States, residing at 594 Forestway Drive, Buffalo Grove, Illinois 60089, have invented an ***"Integrated System for the Administration of an Insurance Company"*** of which the following is a specification.

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The first through fourth generation software systems for life insurance companies still use technology with disjointed data files, outdated mainframe architecture, restrictive data formats and

5 difficult programming languages. The deficiencies are particularly onerous in view of increased  
competition in the insurance industry. Competitive shifts and opportunities in the marketplace are  
characterized by a need for rapid, competent adjustments in product support services, compensation  
systems and customized administrative support. In addition, increasing government regulation and  
reporting have been relentless in recent years and require sophisticated computer system  
10 enhancements. Another problem is a shortage of qualified computer programmers. Of even greater  
importance, the shorter product lead times and life cycles in the insurance industry now require  
products to be implemented more quickly.

In addition to these problems, the data processing departments of insurance companies are  
being asked to provide wider and easier access to the corporate database, in order to provide the  
5 users with the necessary data to administer products and provide prompt customer service. At the  
same time cost must be kept within acceptable levels.

Accordingly, it is an object of the present invention to provide an integrated system for the  
administration of an insurance company at a reasonable cost. This integrated system must reduce  
total data processing costs, reduce product implementation time frames, be easy to use and provide  
20 greater flexibility in product design and commission payment frequency and format.

## SUMMARY OF THE INVENTION

The present invention is an integrated system for the administration of insurance companies. The system includes a plurality of personal computers, a network and one or more file servers. The system further includes software for performing a plurality of functions, the functions including new business processing, policy administration, correspondence, cashiering and disbursement processing, accounting, billing and payment processing, requirement processing, marketing and sales information and maintenance of all subsidiary files. Data files are provided for storing current information characterizing each of these functions. The system is written in a fifth generation language which takes advantage of PC/network distributed environments, utilizing a true relational database design. Manual entry devices such as keyboards allow entry of data relative to these functions. The program receives data and verifies its accuracy. The program then takes the entered and received data, performs the functions enumerated above and updates the data files. The system further includes various devices such as a printer, built-in fax and modems for communicating the updated information to other computers or to external printers, fax machines or other computers outside the network.

The system also provides off-site database support. This support allows a company to process data in one or more locations while maintaining a single consolidated database. This support is well suited for remote, regional processing by separate marketing organizations, or regional processing offices of the company. This support can take one of three forms: (1) selected data files are maintained in their entirety at the remote site, thus allowing both the Home Office and the remote site to view and update any records in these files; (2) a subset of selected data files are maintained at a remote site such that only the subset can be maintained by the remote site but all data including the subset can be maintained by the Home Office; or (3) a subset of selected data

5 files at the Home Office is made available to the remote site for inquiry purposes only. Updating of the multiple data files can be done through a dedicated phone line, or on a periodic batch basis if appropriate.

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An additional feature of the invention is the system for installing the program in individual insurance companies. The system comprises an interface which poses a series of questions to the user upon installation. The questions generally are of the yes or no or multiple choice variety. Based on the answers to the questions, the system is globally modified to conform to these answers. The parameters of the system are thereby modified independently or collectively as required. In a preferred embodiment the system is subdivided into four levels. The database level basically includes all information stored in the computer. The company level divides the database into information concerning a particular company or group of companies. The product line level concerns groups, such as factor based products like traditional life insurance, formula based products such as universal life and fixed annuities and equity-based products such as variable life and variable annuities. The product level is only concerned with specific products, such as a specific type of whole life insurance. By entering the required data the user can profile the parameters of the database, the number and type of companies, the relevant product lines and the specific products of the user.

The invention provides various advantages, including, but not limited to, the following:

a) Various different insurance products are supported, and can be accessed by various different insurance agents or insurance agencies.

25 b) A PC local area network is employed, providing distributed processing for faster speed, yet providing distributed access to a database on a file server.

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5 c) Reverse processing is accommodated, whereby any transaction can be reversed, including reducing an agent's commission when a transaction is reversed. A previous incorrect transaction can be reached and corrected.

d) Policy records are placed in and stay on the system from before application is submitted through while benefits are being paid.

10 e) Applications for insurance are submitted online with screens that vary depending upon the insurance product. There is no need to mail an application. Paperwork is reduced, and a more environment friendly system is provided.

f) An agent hierarchy is established for each client company. The system keeps an electronic record of who an agent reports to and who reports to the agent, which hierarchy can change for different products.

g) The system can calculate commissions depending on level of the agent in the hierarchy. The frequency of making commission payments is variable. It is possible to cause a commission to be paid prior to the scheduled payment date, and the system can be instructed to advance commissions when applications are submitted.

h) The system calculates tax information, and prints a form 1099 for each agent or agency that received commission payments.

i) Information for each agent stored, and information relating to an agent can be retrieved by performing a phonetic search of the agent's name.

25 j) The system provides the capability of generating a form of instructions regarding what labwork is required, and of storing lab results on-line for an underwriter to view. There is no need to mail medical results.



## DESCRIPTION OF THE DRAWINGS

Figure 1 of the drawings is a flow chart generally illustrating the operation of the system.

Figures 2a, 2b and 2c of the drawings are flow chart illustrating screen options displayed during profiling of the system, and the relationship between the various options. It is to be understood that while certain terms included in Figs. 2a, 2b and 2c may not easily be understood by a lay person, they will be clearly understood by a person of ordinary skill in the insurance industry.

Figure 3 of the drawings is a flow chart illustrating screen options displayed during actuation of the system, and the relationship between the various options.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

~~While the invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail several specific embodiments with the understanding that the invention is not limited thereto except insofar as those who have the disclosure before them are able to make modifications and variations therein without departing from the scope of the invention.~~

As illustrated in Figure 1 of the drawings, an integrated system 10 for the administration of insurance companies is disclosed. The system 10 includes a plurality of personal computers 12, 14 and 16, a network 18, and one or more file servers 20. The system 10 further includes a mechanism 22 for performing a plurality of functions in a distributed processing environment. These functions include Mail Tracking, Cashiering, Disbursement Clearing, Requirements Processing, Document Processing, Script Processing, Field Underwriting, Billing, Executive Information, Marketing and Sales Information, Tax Reporting, Vendor Interfacing, Database Management, and Agent

Processing. These functions are profiled (defined below) in a functional profile which is described below.



5 A feature of the invention is that the system includes a user interface which, in the illustrated interface includes one of the personal computers 12, 14 and 16, and which is for setting up the system when it is first installed at an individual insurance company, and when it is desired to modify the system (profiling). In profiling, the user interface generates and displays a series of questions to the user and receives answers from the user, and automatically modifies the system  
10 based on the series of question and answers. These questions usually take the form of yes and no or multiple choice questions which are answered by making a selection from a menu. By answering these questions through a manual entry mechanism such as a keyboard, the system is globally modified to conform to these answers. [For example, when the interface asks the name of the company, and the company name is entered, all correspondence, communications and data entered will be entitled with this company name. If additional companies are specified, then the system will be globally modified to ask to which company the answers being entered refer. When information is sought on a specific company, inquiries will be directed to the specific company requested.] Profiling is also used, for example, to define a new insurance product.

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~~This profiling is performed through menu selections which are illustrated in Fig. 2. Each horizontal row in Fig. 2 represents a menu "level". Any particular block, or menu selection, illustrated in Fig. 2 can be reached by making an appropriate selection from a connected block at a higher level or horizontal row.~~

Each menu involves one or more parameters which may be selectively modified by the user. The user interface is constructed and arranged to modify these parameters at the command of  
25 the user and thereby independently or collectively change that parameter for as many levels as required.

The system is divided into four general exemplary profiles: company profile shown at Fig.



5 person within the department. This assigned piece of mail can be reviewed through online display  
screens by the specific person who can process the piece of mail by creating a transaction, changing  
policy and or agent data, or by creating a response to the piece of mail. After being processed by the  
specific person, the system closes the record relating to the piece of mail by attaching the mail  
record to the completed transaction. In this way, the piece of mail becomes part of the specific  
10 policy/agent record and the completed transaction and/or response. Mail records that haven't been  
closed can be monitored through online displays. These records are displayed by the system in the  
order of oldest to newest to indicate how much mail backlog exists. The system stores information  
relating to how and when the piece of mail is processed.

In the Cashiering, Disbursements, and Billing functions, all accounting is done immediately  
as transactions are processed. All incoming cash must be entered and balanced before it can be  
applied to individual policies. All disbursements, including checks, wire transfers, and internal  
exchanges, are controlled through an integrated approval feature. Suspense amounts are  
automatically kept in balance with ledger accounts.

In the Requirements Processing function, the system provides requirement processing for  
underwriting, enforce policy maintenance, and agent licensing. Follow-ups can be sent internally to  
a named individual or outside in document form. The interface to MIB is automatic and controlled  
by the system.

In the Document Processing function, the system can generate documents either  
automatically (form documents) or at the request of the user. These documents are written using  
25 Wordstar™ or Editext™ or other similar word processing system. The system provides address  
pattern selection, document sorting, mailing exceptions by policy, agent or general agent, and an  
automatic FAX interface. Each document can be viewed online at any time. Users can also log

5 incoming documents, phone calls and miscellaneous notes.

In the Billing function, the system can handle any mode of premium from 1 day to multiple years. Multiple coverages and payments due are easily combined on one bill. The billing process creates a due file which is easily accessed for payment processing. Payments are also batch controlled.

10 In the Marketing and Sales Information function, three types of reporting capabilities are provided - traditional production information by agent and time period, pending reports, and remote agency reporting (through the maintenance of a remote database).

In the Database Management function, in the Audit History sub-function, all changes to policy and agent data are recorded immediately as changes occur. This data can be accessed online by date, policy, agent, name, file or field.

In the Agent Processing function, the system fully supports the licensing process with automatic requirement generation based on state requirements, including the printing of checks for state fees. Commissions are calculated immediately as transactions are processed. Pending commission amount and past commission statements are available online. Statements can be produced independently by agent at any frequency.

In the Names and Addresses function, the system allows an unlimited number of names to be associated with any policy or agent. Each name may have an unlimited number of addresses and phone numbers. Each name and address must be entered only once even though it may be associated with multiple policies or agents. An integrated zip code file is provided to streamline address processing and an intelligent name analyzer standardizes the maintenance of names.

Other features of the system will now be described.

Reversal processing is designed into the system, not added later as an afterthought. The

5 system allows the immediate and simple reversal and reprocessing of any or all policy transactions, including the appropriate adjustments to accounting and commissions.

The system operates in 'people' time, or as the inventors call it, 'Business Time' processing. There is no typical overnight cycle where a master file is passed from beginning to end, searching for events that need to be processed. Instead, the system employs means referred to herein as the  
10 Activity Server/Activity Processor (ASAP).

ASAP includes an Activity Scheduler (one of 12, 14, and 16) which monitors and controls processing. ASAP also includes a plurality of Activity Processors which run programs on dedicated workstations (the remaining of 12, 14, and 16). ASAP is a unique feature that allows any workstation on the network to be assigned as an Activity Processor. ASAP reduces, and in some cases eliminates, the necessity for an operator to wait while real time processing takes place. As previously mentioned, ASAP also eliminates the need for batch overnight processing. Functions are generated as a result of both online activity and prescheduled processing. An Activity Record is created for each function and is added to the Activity File, in date and time sequence. Any function scheduled for a date and time less than the current date and time is selected for processing by the Activity Scheduler. Each function is processed as a separate little batch job in real-time. By employing ASAP, activities can be processed 24 hours per day and are totally independent of online transactions. All critical functions (validation, premium calculation, etc.) are performed immediately as online transactions. Functions such as policy page print, commission calculation, accounting, etc., are not performed while the operator waits. Instead, the Activity Scheduler  
25 schedules these activities to be processed at the next earliest convenience by a workstation (activity processor) dedicated to this purpose (much like a queuing process). These scheduled functions will generally be processed within a few minutes by the workstation (activity processor), making the



5 ~~development tool called MAGIC/PC™, which interfaces with data written into btreive™ files~~  
(btreive™ is another commercially available product). Various menus described above and  
illustrated in Fig. 2, were invented using MAGIC/PC™ and those menus cannot be altered by the  
user of the system.

~~The information for these functions is stored in data files 24. A data receiving and verifying~~

10 mechanism 26 which is built into the system, receives and verifies the data from each of the  
personal computers and the file server. In other words, the data receiving and verifying system  
checks the information received to insure that it corresponds in format and does not conflict with  
the existing data. Following such verification, the system utilizes the information received to  
perform the function shown in Fig. 2. After performing these functions the current data relative to  
each of the functions is updated. A series of data files, which in a preferred embodiment now  
~~exceed three hundred files, store data characterizing each of the functions.~~

As shown in Fig. 3 of the drawings, the functions enumerated above (when used as opposed  
to when being set up or profiled) are interconnected by the system and are sequential. Specifically,  
any inquiry concerning policies will cause the system to present, as one of the options, information  
on a particular agent or agents. Once the agent is identified, in the example shown, an inquiry  
concerning filing an application may be made. Thus, the option of an Application Data (#2) is  
selected. The option as to what Coverages are desired (#4) is then selected. The system will then  
ask the user whether this is an exchange or replacement for an existing policy. The Requirements  
#6 of the policy will then be examined and, once selected, will be Time Stamped and appropriate  
Tax Data will be sent to the appropriate state regulatory body. Under Communications, (#3), once  
the application is entered, communications including Notes will be sent to the appropriate People  
and the appropriate Type of Communication will be sent (memo, letter, bill etc.). Again, under

5 Coverages (#4), once the appropriate coverage is selected, the Agent Maintenance function will determine the appropriate agent hierarchy and compensation for the agent(s) and how it is to be paid. Again, the Application Data (#2) is evaluated and sent to Billing Control. If cash is sent with the application to cover the entire cost, then obviously no bill is required. If any additional coverage date is required, that will be entered. If there are any policy errors, those will be corrected and, if  
10 money is to go to a particular fund, that information will be entered. The appropriate data is then sent to the People function (#5). The People function (#5) receives information, as seen in the left hand column, from insured data. Under the People function, the appropriate addresses and names of the people who need to receive information on this policy are entered and the information is Time Stamped so that if changes are made later, then can be audited. The program and processing  
15 functions have been separated into ten logical groups which are displayed as menu items when first entering the system These include policy administration, agent maintenance, reports, product files, document control, financial systems, activity processor, processor, database displays and the general information. When entering any menu item, subsequent subsystem and program menus are displayed which allow easy access to any desired function. Windows are inherent in the system and  
20 are easily displayed using function keys. Each database file has one or more access codes. Each menu has a two digit code associated with it (and displayed on screen when the menu is accessed), and each access code consists of a concatenation of the two digit codes of the menus passed through to access the database file. A concatenation of the two digit codes of the menus passed through on the way to an intermediate displayed menu appears on screen at the intermediate  
25 displayed menu. Each access code provides a pre-sorted index to values in the file. This feature allows the user to easily access data and insures that response time will be consistent regardless of the file size. This feature also allows the user to easily describe to someone else what menu he or



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she is at and how he or she got to that menu.

The system further includes a means providing for communication between the individual personal computers in the system and to individuals outside of the system. The communication mechanism comprises the Novell™ network connecting the PC's and the file server. In order to provide communication to individuals outside the network and outside the insurance company, the system is connected to one or more laser printers. In addition, the system may include electronic interfaces such as Carbon Copy™ and electronic fax systems such as those commonly known in the art.

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The system also provides off-site database support. This support allows a company to process data in one or more locations while maintaining a single consolidated database. This support is well suited for remote, regional processing by separate marketing organizations, or regional processing offices of the company. Generally, this support can take one of three forms: (1) selected data files are maintained in their entirety at the remote site, thus allowing both the Home Office and the remote site to view and update any records in these files; (2) a subset of selected data files are maintained at a remote site such that only the subset can be maintained by the remote site but all data including the subset can be maintained by the Home Office; or (3) a subset of selected data files at the Home Office is made available to the remote site for inquiry purposes only.

25 An additional feature of the present system is a means for searching the data files under various topics such as agent maintenance, or policy administration. The system is designed to search for a particular agent or client in different ways: by number, by phonetic name, by taxpayer I.D., by alphabetical listing, and by external number. The system also has the ability to search partial names and numbers.

An additional feature of the invention is the method by which the functions described above

5 are processed by the system. The previously described mechanism for updating current data in  
response to entered data and received data from the PC's includes an activity server/activity  
processor mechanism which processes certain functions immediately as on line transactions and  
queue's additional functions in an order preset by the system or by the user as required. The  
processing mechanism analyzes the entered and received data, identifies which function is to be  
10 performed and prioritizes that function for processing.

The system further includes a mechanism for providing a retrievable audit history of every  
function and every transaction performed by the system and all data entered into the system. The  
audit history is retrievable by date and time, person performing the function and transaction type.  
The aforesaid correspondence mechanism includes means for identifying and retrieving  
correspondence on the basis of policy level, the individual agency level, the general agency level,  
the document type or the zip code as required.

A copy of the option structure used in the program is attached hereto and incorporated by  
reference herein. Additionally, the materials filed with the original application including the  
microfiche copy of the program is attached hereto and microfiche copy of a users manual for the  
program are incorporated by reference herein.